

<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/620,374	SHIMIZU, HAJIME	
	<b>Examiner</b>	<b>Art Unit</b>	
	Kimberly D. Nguyen	2876	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 14 January 2004.
2. ☒ The allowed claim(s) is/are 1-19.
3. ☒ The drawings filed on 17 July 2003 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |  |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)  | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment                               |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance   |
|   | 9. <input type="checkbox"/> Other _____.   |

**DETAILED ACTION**

*Amendment*

1. Acknowledgement is made of Amendment filed 14 January 2004.

*Allowable Subject Matter*

2. Claims 1-19 are allowed.
3. The following is an examiner's statement of reasons for allowance:

The record of prior art fails to teach a two-dimensional code reading method having processing steps of: acquiring an image of a two-dimensional matrix code composed of a number of cells arranged in vertical and horizontal directions to form a matrix of the cells each representing binary coded data; deciding a two-dimensional code area in the image; and setting inspection lines identifying a center position of each of the cells, the inspection lines each joining two paired opposites of four sides defining a boundary of the decided two-dimensional code area and reproducing information of the two-dimensional code based on the inspection lines set by the inspection line setting processing, wherein coefficients in image position calculating equations for calculating coordinate positions of center positions of respective cells in the two-dimensional matrix code compensated for image inclination by adding inclination information for the two-dimensional matrix code are calculated for setting the inspection lines on the two-dimensional matrix code image based on coordinate positions of four points within the two-dimensional matrix code area decided by the two-dimensional matrix code area deciding step.

Ooyama et al (US 4,820,928) teaches the lithography apparatus in accordance with the present invention comprises a framing pattern memory for storing therein framing lines of a pattern to be drawn in the form of dot images, a framing pattern generator for writing framing

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lines of patterns to be drawn into the framing pattern memory in the form of dot images, the framing pattern generator including a vector generator and a curve generator, and a raster scanning circuit for drawing by scanning with the beam while scanning the framing pattern memory and emitting the beam only inside framing lines of the pattern to be drawn. At first, framing lines of the pattern to be drawn are stored into the framing pattern memory using the framing pattern generator. Then, the framing pattern memory is scanned by the raster scanning circuit for drawing; and the beam is irradiate only inside the framing lines of the pattern to draw the desired pattern.

Widergren (US 4,302,775) teaches a digital video compression system and its methods for compressing digitalized video signals in real time at rates up to NTSC color broadcast rates. The system compressor receives digitalized video frames divided into sub-frames, performs in a single pass a spatial domain to transform domain transformation in two dimensions of the picture elements of each sub-frame, normalizes the resultant coefficients by a normalization factor having a predetermined compression ratio component and an adaptive rate buffer capacity control feedback component, to provide compression, encodes the coefficients and stores them in a first rate buffer memory asynchronously at a high data transfer rate from which they are put out at a slower, synchronous rate.

However, Ooyama and Widergren, taken alone or in combination thereof, fails to teach a two-dimensional code reading method having processing steps of: acquiring an image of a two-dimensional matrix code composed of a number of cells arranged in vertical and horizontal directions to form a matrix of the cells each representing binary coded data; deciding a two-dimensional code area in the image; and setting inspection lines identifying a center position of

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each of the cells, the inspection lines each joining two paired opposites of four sides defining a boundary of the decided two-dimensional code area and reproducing information of the two-dimensional code based on the inspection lines set by the inspection line setting processing, wherein coefficients in image position calculating equations for calculating coordinate positions of center positions of respective cells in the two-dimensional matrix code compensated for image inclination by adding inclination information for the two-dimensional matrix code are calculated for setting the inspection lines on the two-dimensional matrix code image based on coordinate positions of four points within the two-dimensional matrix code area decided by the two-dimensional matrix code area deciding step.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


### ***Conclusion***

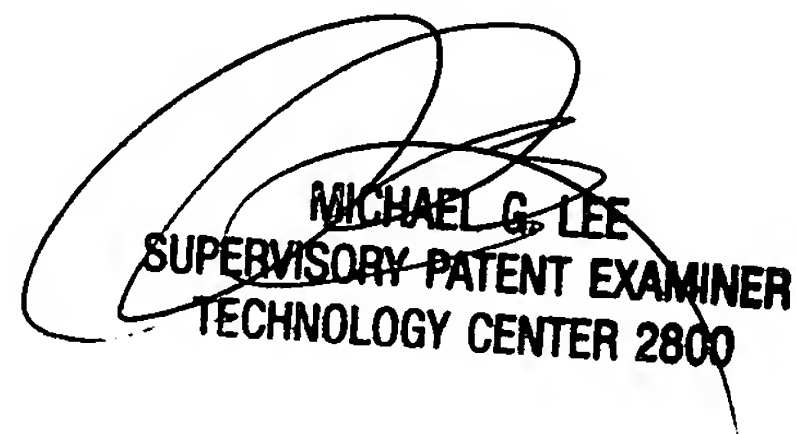
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimberly D. Nguyen whose telephone number is 571-272-2402. The examiner can normally be reached on Monday-Friday 7:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached on 571-272-2398. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
KDN  
14 April 2004

  
MICHAEL G. LEE  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800